AMENDMENTS TO THE CLAIMS

1-5 (Cancelled)

6. (Currently Amended) ~~The optical device of claim 1,~~ An optical device, comprising:

a first element having a first index of refraction; and

a second element that communicates with the first element and has a second index of refraction,

wherein one of said first and second elements includes a portion having first and second conductive layers or plates, that element can change the entry direction of a radiated beam into the other of said first and second elements, and the radiated beam is substantially transmitted through the portion between the conductive layers or plates, and further wherein the first element can change the entry direction of the radiated beam into the second element to cause total internal reflection of the beam in the second element.

7-8. (Cancelled)

9. (Currently Amended) ~~The optical device of claim 5,~~ An optical device, comprising:

a first element having a first index of refraction;

a second element that communicates with the first element and has a second index of refraction, wherein one of said first and second elements includes a portion having first and second conductive layers or plates, the first element can change the entry direction of a radiated beam into the second elements, and the radiated beam is substantially transmitted through the portion between the conductive layers or plates; and

~~further comprising~~ a first and second orienting layer disposed on the first and second conductive layers or plates, respectively, wherein the first and second orienting layers face each other with the refractive layer disposed between the first and second orienting layers.

10. (Original) The optical device of claim 9, wherein the first and second orienting layers comprise at least one material selected from the group consisting of silicon monoxide and magnesium fluoride.

11-12. (Cancelled)

13. (Currently Amended) ~~The optical device of claim 1,~~ An optical device, comprising:

a first element having a first index of refraction; and

a second element that communicates with the first element and has a second index of refraction,

wherein one of said first and second elements includes a portion having first and second conductive layers or plates, that element can change the entry direction of a radiated beam into the other of said first and second elements, the radiated beam is substantially transmitted through the portion between the conductive layers or plates, and ~~wherein~~ the first element includes a liquid crystal layer that acts as a refractive layer.

14. (Original) The optical device of claim 13, wherein the liquid crystal layer contains a plurality of liquid crystal molecules arranged in substantially heterotropic alignment in the refractive layer.

15-18. (Cancelled)

19. (Currently Amended) ~~The optical device of claim 1,~~ An optical device, comprising:

a first element having a first index of refraction; and

a second element that communicates with the first element and has a second index of refraction,

wherein one of said first and second elements includes a portion having first and second conductive layers or plates, that element can change the entry direction of a radiated beam into the other of said first and second elements, and the radiated beam is substantially transmitted through the portion between the conductive layers or plates, and further wherein the radiated beam at an interface between the first element and the second element includes a spurious signal, and wherein at least one of the first element and the second element has a length that attenuates the spurious signal to a predetermined desirable level.

20-21. (Cancelled)

22. (Previously Presented) An optical device, comprising:

an active element having

a first conductive substrate;

a second conductive substrate;

a first orienting layer; and

a second orienting layer disposed on the first and second conductive substrates and facing one another; and

a refractive layer disposed between the first and second orienting layers and having a variable index of refraction that is responsive to the electric field; and

a passive element, wherein one of the active element and the passive element can change an entry direction of a radiated beam into the other of the active element and the passive element, and further wherein the beam is

substantially transmitted through the active element between the first conductive substrate and second conductive substrate.

23. (Original) The optical device of claim 22, wherein the passive element has a fixed index of refraction.

24. (Original) The optical device of claim 22, wherein the passive element has a variable index of refraction that is fixable to a selected value.

25. (Original) The optical device of claim 22, wherein the active element can change the entry direction of the radiated beam into the passive element to achieve total internal reflection of the beam in the passive element.

26. (Original) The optical device of claim 22, wherein the passive element can change the entry direction of the radiated beam into the active element to achieve total internal reflection of the beam in the active element.

27. (Original) The optical device of claim 22, wherein the electric field is variable.

28. (Original) The optical device of claim 27, further comprising a variable voltage source in communication with the first and second conductive substrates for applying variable voltage, and wherein varying the voltage results in the variable electric field that controls the first index of refraction.

29. (Original) The optical device of claim 22, wherein the refractive layer is a liquid crystal layer.

30. (Original) The optical device of claim 29, wherein the liquid crystal layer contains a plurality of liquid crystal molecules arranged in heterotropic alignment in the refractive layer.

31. (Original) The optical device of claim 22, wherein the refractive layer comprises at least one selected from the group consisting of liquid crystal, poly (N-vinylcarbazole) (PVK), PMMA, or a photorefractive material.

32. (Original) The optical device of claim 22, wherein the first and the second conductive substrates comprise metal.

33. (Original) The optical device of claim 22, wherein the first and the second conductive substrates comprise an electrically conductive material deposited on nonconductive plates.

34. (Original) The optical device of claim 22, wherein the first and second orienting layers comprise at least one selected from the group consisting of silicon monoxide and magnesium fluoride.

35. (Original) The optical device of claim 22, wherein the radiated beam at an interface between the active element and the passive element includes a spurious signal, and wherein at least one of the active element and the passive element has a length that attenuates the spurious signal to a predetermined desirable level.

36. (Previously Presented) The optical device of claim 22, wherein the optical device controls an exit direction of the radiated beam to switch between a first direction and a second direction.

37. (Previously Presented) The optical device of claim 22, wherein the optical device controls an exit direction of the radiated beam to scan over a selected range.

38-39 (Cancelled)

40. (Currently Amended) ~~The method of claim 38 further~~ A method of manufacturing an optical device, the method comprising:

providing an active element having a refractive layer having a variable index of refraction between first and second conductive layers, the first and second conductive layers being comprised to substantially retain the transmission of a radiated beam therebetween;

~~comprising~~ depositing a first and a second orienting layer on the first and a second conductive layers, respectively, wherein the refractive layer is sandwiched between the first and second orienting layers; and

coupling the active element to passive element having a fixed or fixable index of refraction to form the optical device,

wherein a voltage applied to the first and second conductive layers results in an electric field.

41. (Original) The method of claim 40, wherein the depositing is conducted via vacuum deposition.

42. (Original) The method of claim 41, wherein the depositing material is at least one selected from the group consisting of silicone monoxide and magnesium fluoride.

43. (Currently Amended) ~~The method of claim 38,~~ A method of manufacturing an optical device, the method comprising:

providing an active element having a refractive layer having a variable index of refraction between first and second conductive layers, the first and second conductive layers being comprised to substantially retain the transmission of a radiated beam therebetween; and

coupling the active element to passive element having a fixed or fixable index of refraction to form the optical device,

wherein a voltage applied to the first and second conductive layers results in an electric field; and further wherein the refractive layer is a liquid crystal layer containing a plurality of liquid crystal molecules, and wherein the method includes a depositing act that comprises aligning the liquid crystal molecules in heterotropic alignment.

44-49. (Cancelled)